

C O M M U N I T Y N E W S

Volunteers help Seabrook students build solar cart

Mike Ewert certainly knows how to rev the engines of local students.

Ewert, life support analyst, was part of a team of JSC engineers who worked with Seabrook Intermediate School students on a Solar Go-Cart project. Other JSC mentors included David Bergeron, Space Industries, a division of GB Tech., and NASA's Cindy Cross, Tico Foley, Katy Hurlbert, Scott Lazaroff, Karen Nyberg, and Michael Rouen.

Together, in less than one month's time, the student-mentor team designed a go-cart powered exclusively by solar energy. Lightweight flexible solar photovoltaic (PV) panels on the hood and roof of the cart charge the battery whenever the cart is in the sun. A separate, stationary PV panel can also be used to provide a faster charge if desired.

"I didn't think we could do it at first," said Courtney Lankford, a seventh-grade student who worked on the project. "I helped with the chassis part and learned a lot about renewable energy."

Many of the solar go-cart's other components, such as the motor and the steering system, were cannibalized from a children's motorized toy jeep. The frame was constructed using PVC pipe and glue and students shaped plexiglass using a heat gun to form the hood of the vehicle. The cart also features a bench seat and an adjustable accelerator pedal to accom-

modate the varying heights of the drivers.

"I liked the construction part and the building of the cart the most," said Jonathan Peavey, a seventh-grade student who worked on the project.

The cart didn't come without challenges though. Like any engineering design project, setbacks arose, but the students tackled them just as any other. For instance, during an early test, a 30-amp fuse blew and the team determined that they needed to put in a circuit breaker. Early on, the cart also suffered from a bent axle but the problem was quickly remedied by reinforcing the axle.

At a presentation unveiling the solar-powered cart to students and parents, Ewert credited NASA for providing him with volunteer time for the project as well as loaning the solar panels. Ewert also recognized many of his colleagues for their assistance.

"It's thinking about the future that motivated me to do this," said Ewert as he addressed an outdoor crowd of students, teachers and parents. "On pretty days like this, you can see the haze and it makes you really see the pollution in our area. It will be students like these that will lead us to the goal of cleaner air to and renewable energy sources that help reduce our dependence on imported oil."

The solar-powered vehicle was seen by thousands of people at the Houston Earth Day celebration last month. ■



ALL SYSTEMS GO — Seabrook Intermediate students revel at the success of their solar-powered go-cart during a recent demonstration for parents and schoolmates. Mike Ewert, NASA, center, was a JSC volunteer mentor who helped the students build the vehicle while teaching them about renewable energy. Shown here, left to right, are Ash Robson, Trey Garner, Max Muzerie, Robert McPhail, Chris Zinn, Mason Markee and Jonathan Peavey.

Are you the missing link in Space Link?

Can you share about three hours of your day with an area student a few days this summer? If so, your time and enthusiasm are needed as JSC prepares to participate in Space Link, a career-shadowing program formerly known as Vital Link.

Volunteers are needed to host approximately 20 students from area schools who will visit JSC June 5-8. Their visits will last from 8:30 - 11:30 a.m. each day. Professionals in all fields are welcome to participate in providing the students with an opportunity to explore careers in aerospace.

The goal is to have the students experience firsthand how classroom subjects are used in the workplace. Volunteers are welcome to show the students various sites of the center, such as the Mission Control Center, Lunar Sample Laboratory Facility,

or the mockups as well as share their own daily activities and projects.

"Some of directorates invite a student and then have them rotate throughout the team each day," said Robin Hart, Speakers Bureau coordinator. "But we've found that the students have a better experience when they pair up with one person for the program. They feel more comfortable and build a better relationship than they might by being introduced to a new person each day as well as new sights and sounds."

Civil servants interested in sharing some of their time may contact Hart at x34754 for more information. On-site contractors should contact their education team for information on how to be involved. ■

Other volunteer opportunities can be found at <http://www4.jsc.nasa.gov/scripts/eweek/outreach.asp>

Community college students board KC-135 for first flight



Northwest College team members Jason Tisdale, Tomi Fatunde and Tracy Scott (mentor) test their experiment on projectile motion.

For the first time in the history of NASA's Reduced Gravity Student Flight Opportunities Program, community college students got a chance to fly their experiments aboard the KC-135 "Weightless Wonder."

Forty-eight students, from throughout Texas but mostly from the Houston area, participated in eight teams as members of flight and ground crews during the community college flights. The flights took place the week of April 17.

Experiments covered studies of gravity, elodea leaves, projectile motion, pharmaceutical aerosols, surface tension and viscous effects,

resistive exercise devices and plant pollination in microgravity.

JSC scientists and engineers served as mentors for the flight teams. Prime mentors were Elizabeth Bloomer, Rod Lofton, Bob Stuckey, Tracy Scott, Chuck Lloyd, and Katy Hurlbert. Backup mentors were Adam Dershowitz, Bryan Snook, Brett Maryott, and Chris Johnson. Carol Grunsfeld and Beth Shepherd served as co-mentors for one team.

About 1,000 students have flown in zero g aboard the KC-135 since NASA's Reduced Gravity Student Flight Opportunities Program began in 1995. ■

Employees' children earn scholarships

This year's winners of the NASA College Scholarship Fund are Derek Juang, son of Langley Research Center employee Jer-nan Juang; Natalie Yip, daughter of Langley Research Center employee Long P. Yip; Joyce Stuckey, daughter of NASA Headquarters employee Ronald K. Stuckey (and sister to 1998 recipient, Jennifer Stuckey); Karen Ruff, daughter of retired Marshall Space Flight Center employee Rudolph C. Ruff; Justin Montenegro, son of Marshall Space Flight Center employee Justino Montenegro; and Katie Hancock, daughter of Wallops Flight Facility (Goddard Space Flight Center) employee David W. Hancock III. This brings the total number of recipients to 90 and 56 of these have graduated.

Applications were restricted to dependents of NASA employees who are planning to major in science or engineering. All NASA centers were well represented among the candidates with 69 eligible applications received. All had exceedingly high grade point averages and all scored well on the SAT (several in the 1,500 range and one with 1,600) and all were actively involved in their community.

The NASA College Scholarship Fund, Inc., Board of Directors has determined that seven scholarships will be awarded next year. Each scholarship will be renewable annually for a maximum of \$8,000 over six calendar years.

The Scholarship Fund was established to award scholarships agencywide to qualified dependents of NASA and former NASA employees. The Fund was established as a direct result of a substantial unsolicited gift by the noted Pulitzer Prize winning author, James A. Michener. Many NASA employees have contributed to the fund directly or through the Combined Federal Campaign. Other major contributors include the Freedom Forum (to honor the Hubble crew members in 1994 and again in 1997 to honor Shannon Lucid) and the JSC and KSC Chapter's of the NASA Alumni League. The Fund will be listed in this year's CFC as a National Unaffiliated Agency (identification number 1038). ■

Further information about the Scholarship Fund may be obtained from Teresa R. Sullivan at x31034.